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ABSTRACT

The paper assesses the degree of understanding about the free enterprise system gained by participants in a one-month summer inservice teacher training institute. Developed in response to a 1973 Texas House Bill which mandated the inclusion of free enterprise education in the secondary curriculum, the institute suggests major topics, concepts, and behavioral objectives for use by teachers of economics. All 38 participants in the 1977 American Economy Institute at Texas A & M University took a 105-item test instrument as a pretest at the beginning of the program and again as a posttest at the conclusion of the program. Teacher's test results indicate that there was a significant gain in participant understanding of all areas of free enterprise except alternative economic systems. The conclusion is that the American Economic Institute workshop succeeded in transmitting content associated with objectives and major topic areas related to the teaching of free enterprise. During a projected second phase of the investigation, a shorter version of the test will be administered to students taught by workshop participants. Presented in the appendix are a copy of the 105-item Free Enterprise Understanding test with answer key, and the shorter 50-item version of the test for use with secondary school students. (Author/DB)

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Development of Behavioral Objectives and Test Items on "Free Enterprise" and Assessment of "Free Enterprise" Training's Impact on Understandings of (1) Teachers taking the Training and (2) Secondary Students in those Teachers' Classes: Phase 1

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ABSTRACT

Major topic areas, major concepts, and behavioral objectives were identified and used to guide instruction of 38 inservice Texas secondary school teachers who attended the 4th annual American Economy Institute at Texas A&M University during June 1977. A 105-item multiple choice test was developed. Items of this instrument were tied to specific topic areas, concepts, and behavioral objectives.

Participants in the American Economy Institute took this instrument as a pretest at the beginning of the four-week program and again as a posttest at the conclusion of the program. Examinations of differences between pretest scores and posttest scores revealed that participants had gained significantly in understandings related to the major topics of (1) The Economic Problem, (2) Free Enterprise and the Economic Problem, (3) Supply, Demand, Markets, and Prices, (4) Evaluation of the Free Enterprise System, and (5) Economic Performance: Measures and Dimensions. No significant differences were observed between pretest and posttest scores associated with the major topic of Alternative Economic Systems. This non-significant finding, on inspection, appeared to be related more probably to an instrumentation deficiency than to a programmatic deficiency.

In general, these analyses revealed that the American Economy Institute was successful in conveying to teachers information related to the free enterprise feature of American capitalism. One implication

is that a short, intensive instructional experience does seem to have the capability of preparing inservice teachers to deal with topics in the free enterprise education course mandated by Texas House Bill 1118 of 1973.

From the 105-item test administered to the American Economy Institute participants, a shorter 50-item version was developed for use with secondary school students. Additionally, major topics and major concepts were identified that might be useful in guiding instruction in the secondary school free enterprise education course. Individual items in the 50-item test were tied to these topics and concepts as well as to behavioral objectives that might provide an appropriate framework for guiding instruction. Packages of materials were developed including these behavioral objectives, major topics, major concepts, and 50-item tests. Two hundred copies were prepared and offered to schools in Texas through invitations extended to the Regional Service Centers throughout the state.

During phase two of this investigation, the 50-item test will be administered in the fall to classes of students taught by participants in the American Economy Institute of 1977. The same test will be given again to the same students as a posttest during spring 1978. Data will be examined with a view to determining whether teachers who profited greatly from the American Economy Institute of 1977 (as evidenced by comparison of pretest and posttest differences on the 105-item version taken during summer 1977) had students in their classes who also demonstrated great gains in terms of pretest and posttest differences (as measured by the fall 1977 and spring 1978 administrations of the 50-item versions). This phase of the investigation seeks to discover the extent to which there is a "flow through" to students

of information acquired by their teachers during the American Economy Institute of 1977.

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Development of Behavioral Objectives and Test Items on "Free Enterprise" and Assessment of "Free Enterprise" Training's Impact on Understandings of (1) Teachers taking the Training and (2) Secondary Students in those Teachers' Classes: Phase 1

THE PROBLEM

A. Overview

In 1973, Texas House Bill 1118 was signed into law. This important piece of legislation, for the first time, mandated the inclusion of "free enterprise education" in the secondary school curriculum in Texas. Passage of this legislation presented secondary school administrators and teachers with a dilemma. They found themselves with an immediate need to teach elements of the "free enterprise system" to their students, but all too frequently found themselves deficient in terms of their expertise to accomplish this task. A logical response to this situation has been the development of a number of ad hoc inservice training programs designed with a view to providing teachers with a responsible information base upon which they can draw in their free enterprise education courses. One such program has been the American Economy Institute, offered each summer at Texas A&M University since 1974.

The program offered by the American Economy Institute, similar to those offered by other institutions and agencies, has been premised on the assumption that provision of content to inservice teachers will translate into

an adequate representation of that content by those teachers to their own secondary school students. This study represented the first phase of a two part effort designed to probe the supportability of this widely held expectation. Specifically, this study sought to determine the impact of the short, four-week American Economy Institute experience on teachers' understandings of concepts related to free enterprise education. The second phase of this investigation will focus on students taught by teachers who participated in the American Economy Institute of 1977 to determine whether the expectation that students in classes of teachers who did well in the Institute will be superior performers on a test focusing on free enterprise education to be given at the conclusion of the 1977-1978 school year.

To accomplish the purposes of the first phase of this investigation, it was necessary to develop a scope and sequence that might be appropriate for the free enterprise education course. Existing Texas guidelines in this area, while suggesting a commendable variety of learning activities, were deemed lacking in terms of speaking to the critical issue of learner outcomes. Consequently, a list of topics was developed jointly by professionals associated with the 1977 American Economy Institute that were believed to be consistent with the intent of House Bill 1118. From these topics, nineteen behavioral objectives were derived to be used as guides to instructional practice. Indeed, these objectives did serve to frame the instructional activities in the 1977 American Economy Institute. To determine the impact of the Institute on participants, a 105-item multiple choice test was developed. Individual items were keyed to major topics and to specific behavioral objectives. This test was administered on the first day of the Institute as a pretest and on the final day as a posttest. Various analyses of differences betweeen pretest and posttest scores were

conducted with a view to determining the relative strengths and weaknesses of different components of the Institute program as well as to providing a more general assessment of the influence of the total Institute on participants understandings.

From these data, a shorter 50-item test was developed. As was the case with the 105-item test given to the Institute participants, this test was keyed, by item, to specific topic areas and behavioral objectives. This instrument will be used during the 1977-1978 shcool year to pretest and post-test students in classes taught by 1977 American Economy Institute participants. Data will be analyzed as part of the second phase of this investigation.

B. Relevant Research Background

Are teachers' demonstrations of proficiency in training situations related significantly to cognitive achievement of learners? Basic as is the question, research efforts directed toward providing an empirically-grounded answer have been few. Dunkin and Biddle (1974) point out that Gage's 1964 Handbook of Research on Teaching includes only a single reference to cognitive achievement in the classroom in its massive index.

In attempting to explain the dearth of research in this area, McNeil and Popham (1973) point out that by assuming a given teacher proficiency is related causally to an increase in learners' cognitive achievement a researcher can concentrate on data easily obtainable at a teacher training facility. This convenient, but inaccurate, construction of reality frees the researcher from any obligation to cut through the thorny political thickets of public school human subjects research committees as a preface to securing data about learners in school settings.

While some may dispute McNeil and Popham's conclusions, a number of

researchers agree that little attention has been paid to the question of teacher preparation as it impacts learners' cognitive achievement. (Rosenshine & Furst, 1971; McNeil & Popham, 1973; Dunkin & Biddle, 1974. Turner, 1975). In this connection, Rosenshine and Furst (1971) assert that " . . . little investigation has been made of any differences in student product measures which occur after teachers have been trained . . . ." In the same vein, Turner (1975) notes that "a clear characteristic of the recent research literature is the inadequate attention paid to the consequences of the new developments in training procedures."

Need for research in this area has been articulated by a number of well-known authorities. (Rosenshine & Furst, 1971; McNeil & Popham, 1973; Dunkin and Biddle, 1974; Turner, 1975). Rosenshine and Furst (1971) contend that, in planning for teacher education, it is necessary that we "include not only ways to increase our knowledge of how best to train teachers to perform specific behaviors, but more importantly, ways to increase our knowledge of relationships between the specific teacher behaviors and measures of pupil achievement." Supporting this contention, McNeil and Popham (1973) point out that "a focus on pupils reveals far more about the effectiveness of teachers than does direct study of teachers themselves.)

While investigations directed toward establishing a connection between teacher training and learners' cognitive achievement have been few, scattered examples of the genre do appear in the research literature. Taba (1966) found that special training of teachers increased both the frequency of teachers' use of higher level thought units and pupils' use of higher level thought units. However, these changes did not affect pupil achievement significantly as measured by the Sequential Test of Educational Progress Social Studies Test.

Rogers and Davis (1970) found that teacher training in the use of

Bloom's cognitive Taxonomy decreased the frequency of teachers' use of knowledge-level categories and increased teachers' use of higher level categories. The investigators found teachers' use of higher level categories to be unrelated to pupils' achievement.

Blankenship (1970) randomly assigned one group of preservice teachers to a special learning condition that included (1) training in Flanders' Interaction Analysis and (2) a teach, then reteach microteaching experience. A second group received no such training. The trained group, during student teaching, had a higher ratio of indirect to direct statements than did the untrained group. This reflected the impact of the Flanders' training. Pupils of trained teachers scored higher on the knowledge component of a posttest adminstered after completion of a unit of work on "values" lasting one week than did pupils of the untrained teachers. No differences were observed between scores of pupils in classes of trained and untrained teachers on the application component of the posttest nor on the Watson-Glazer Critical Thinking Appraisal.

Francke (1971) assigned 15 preservice teachers to a traditional teacher training program and 15 others to a new program emphasizing the development of competencies in certain specified teaching skills. Teachers in the new (specified teaching skills) program were found to be better able to demonstrate teaching skills in the classroom than teachers in the group exposed to the traditional training program. Further, after student teaching, learners in classes taught by the individuals trained in the new program were significantly better academic achievers than students in classes taught by teachers trained in the traditional program.

These studies, though few in number, underscore the concern of Dunkin and Biddle (1974) that widely-held assumptions regarding the efficacy of a given training procedure as an alleged "promoter of achievement" may not

be valid. Surely the results of the Taba (1966) and the Rogers and Davis (1970) studies give added force to Dunkin and Biddle's (1974) concern that more attention ought to be given to the demonstrated rather than simply to the presumed learner achievement "pay off" of a specifified teacher training procedure.

Those studies that have investigated the teacher-training/learners' achievement question have attemoted to discover a connection between a given program's impact on teachers and its "pass through" impact on learners taught by those teachers. Nearly all of these studies have centered on teacher training programs designed to develop generic teaching skills that have application across a wide area of subject areas. Studies directed toward demonstrating the subsequent effect on learners of teacher training programs with a tight focus on a limited body of content within a given discipline or subject area have been all but nonexistent. Given present demands for accountable instruction that seek hard evidence about how learners are performing within specific subject areas, there is a clear and present need for research efforts addressed to the question of how subject-specific teacher training programs affect cognitive achievement of learners.

In Texas, this need has been articulated clearly in the language of House Bill 1118 that became law in 1973. This legislative mandate directs that "all high schools will provide instruction in the essentials and benefits of the free enterprise system." The implication of this legislative mandate is that, at some point, there will be a requirement for those responsible for implementing free enterprise programs to demonstrate that, beyond simple implementation, students are learning something about the free enterprise system. Given this context, the present study attempted to develop a systematic data base that could be used to (1) determine how

successfully a given teacher training program (American Economy Institute of 1977) was giving teachers a solid understanding of principles associated with free market economics and (2) determine whether teachers acquiring those principles in this training setting were able to pass them on effectively to students in their own classrooms.

C. Definitions

1. American Economy Institute. A summer program directed at a target audience of inservice teachers that has been presented each summer since 1974 at Texas A&M University, College Station, Texas. The program introduces participants to the fundamental principles of the free enterprise system.
2. Behavioral objective. A statement describing what a learner ought to be able to do (described in observable terms) as a consequence of a learning experience or sequence of learning experiences to which he has been exposed.
3. Contract activity package. Organized learning material, usually printed in form and given to the learner who will use it, that focuses on specific behavioral objectives and describes alternative learning and reporting procedures that may be used to complete work related to a given topic.
4. Individualized instructional product. Instructional material organized according to alternative modes including (1) contract activity packages, (2) learning stations, (3) programmed instruction developed by 1977 American Economy Institute participants to help students in their own classrooms to learn selected concepts associated with free enterprise education at a rate and at an intensity consistent with students' individual capabilities.

5. Learning station. A portion of a classroom where specific instructions and materials are provided that direct students to go through a prescribed set of learning experiences focusing on a specific topic.

6. Participant. An inservice teacher who enrolled in the American Economy Institute of 1977 at Texas A&M University, College Station, Texas.

7. Programmed instructional package. A cluster of learning materials organized according to a mastery learning scheme according to which each preceding step muste be learned to an acceptable criterion level before the next step can be attempted.

8. Texas House Bill 1118. The 1973 legislation that directed all Texas high schools to "provide instruction in the essentials and benefits of the free enterprise system."

9. Topic organization matrix. A scheme for representing graphically topics covered within a given content area that depicts their relationship to individual behavioral objectives and to test items tied to those behavioral objectives.

D. Focus of this Study

This study, the first of two parts of a broader investigation, sought to determine the impact of the American Economy Institute on participants' understandings of the free enterprise system. The most fundamental question was simply: "Did the participants learn anything?"

Before any movement at all could be made toward answering this highly interesting question, it was necessary to identify what it was they should have learned. A massive review of materials distributed by such organizations as the Joint Council on Economic Education revealed some outstanding attempts to identify purposes for a general course in introductory economics.

None of these materials, however, had a specific focus on the free enterprise feature of the American capitalistic system. Consequently, it became necessary to identify purposes unique to the free enterprise education focus of the American Economy Institute of 1977. These efforts ultimately resulted in development of a sequence of topics, behavioral objectives describing intended student outcomes related to those topics, and a 105-item test with individual questions related systematically both to topics and to behavioral objectives. This test was used as a measure of participants learning. Differences were computed between administrations of this instrument at (1) the beginning of the American Economy Institute of 1977 and (2) the conclusion of the American Economy Institute of 1977.

This test included items that were written at two levels of cognitive sophistication (1) demonstration understandings and (2) making applications and inferences. Scaling of items into these two categories of cognitive sophistication made it possible to examine pretest and posttest scores composed of the two subscales as well as to compare total test scores on the pretest and posttest administrations.

This capability was of some interest because of an ancillary feature of the summer Institute program that was thought to have some bearing on participants likelihood of learning the material. Some prior investigative work (Berman, McLaughlin, &Wallin 1976) has suggested that learning and commitment may be enhanced when participants are directly involved in materials development. As a consequence of this finding, participants were provided opportunities to develop individual instructional products for use with their own students in their own classrooms. Participants were assigned specific behavioral objectives to use as a focus for the development of these materials. By following this procedure, the stage was set for a comparison between participant gain scores between pretest

and posttest administrations on test items associated (1) with behavioral objectives used as bases for development of individual instructional products and (2) with behavioral objectives not used as bases for development of individual instructional products.

Finally, since specified clusters of test items were tied to each topic covered during the American Economy Institute of 1977, it was possible to compare gain scores across all topics for the purpose of determining any areas of particular strength and weakness. This interest and those mentioned above resulted in the generation of the following research questions.

1. Did participants score higher on the posttest than on the pretest as measured by a comparison of the two total test scores?
2. Did participants score higher on the "demonstration of understandings" items on the pretest than on the posttest?
3. Did participants score higher on the "making applications and inferences" items on the posttest than on the pretest?
4. Did participants score higher on items associated with each topic on the posttest than on the pretest?
5. Did participants score higher on the posttest than on the pretest on items tied to behavioral objectives that were used to guide preparation of individualized instructional products?

METHODOLOGY

A. Treatment

In its most general sense, the "treatment" for this study consisted of the substantive content and learning experiences to which participants in the 1977 American Economy Institute were exposed. This four-week program, from June 6 to July 1, 1977, exposed participants to Economics 615 (The American Economy), a course designed to promote understanding of the

free enterprise feature of the American capitalistic system, and to EDCI 689a (Individualizing Instruction in Economic Education), a course designed to provide participants with expertise in instructional materials design and with an opportunity to produce economics-related learning materials for use in their own classrooms.

In attempting to identify a framework for Economics 615, course guides developed by such groups as the Joint Council on Economics Education were examined. While much of merit was found in these materials, their general focus tended to be broader than desired than the desired singular focus on the free enterprise feature of the American capitalistic system. A document produced by the Texas Education Agency, Teaching the Free Enterprise System in Required Social Studies Courses, was also reviewed carefully. While containing commendable advice and suggestions in the area of student-involving classroom activities, this material, too, was found to be somewhat diffuse in its focus. This finding, logical enough considering its purpose of suggesting how free enterprise contents might be fitted into exisiting course strutures, suggested that the document would not be an appropriate referent against which to structure a course with an exclusive focus on the free enterprise feature of the American capitalistic system. Since available materials with this focus were found to be unavailable, a decision was made to borrow from available sources, when appropriate, and to construct new material, when necessary, with a view to developing a list of topics and behavioral objectives that might be appropriate to guide instruction aimed at delivering content that would enable teachers to do a creditable job of teaching a free enterprise course consistent with the intent of Texas House Bill 1118.

This effort resulted in the following major topics, major concepts, and behavioral objectives being identified:

Topic A: The Economic Problem

Major Concepts: Economic Wants, Productive Resources, Scarcity and Choice, Opportunity Costs, Trade-Offs, Marginalism and Equalibrium

Behavioral Objectives: Participants will point out central features of the "economic problem."

Participants will define and describe relationships between the concepts "scarcity" and "opportunity cost."

Topic B: Alternative Economic Systems

Major Concepts: Tradition, Command/Centralized Economy, Market/Decentralized Economy, Mixed Economy, Economic Activities

Behavioral Objective: Participants will differentiate among "traditional economies," "market/decentralized economies," and "mixed economies."

Topic C: Free Enterprise and the Economic Problem

Major Concepts: Incentives, Market Mechanism, Competition, Circular Flow of Income, Role of Profits and Losses, Economic Freedom, Property Rights, Limited Government.

Behavioral Objectives: Participants will describe producer and consumer incentives in a free enterprise economy.

Participants will describe the market mechanism.

Participants will identify the role played by competition in a free enterprise economy.

Participants will point out the scope and function of property rights in a free market economy.

Participants will identify effects of profits and losses in a free enterprise economy.

Topic D: Supply, Demand, Markets and Prices

Major Concepts: Microeconomics, Market, Supply and Demand, Prices, Wages, Rents, Interest Rates, Market Structures, "Other Things Being Equal."

Behavioral Objectives: Participants will define the concepts "supply" and "demand" and describe how changing relationships between supply and demand affect prices.

Participants will describe the role of prices in a free market economy.

Participants will describe variables that go together to define a "market structure."

Topic E: Evaluation of the Free Enterprise System

Major Concepts: Goals of Society, System Performance, Role of Government

Behavioral Objectives: Participants will critique the performance of economic systems in terms of their (a) allocative efficiency, (b) distribution of income/wealth, (c) ability to promote economic stability.

Participants will identify goals of society and point out how alternative priorities among these goals affect the nature of a given economic system.

Participants will evaluate governmental intervention in the private sector.

Topic F: Economic Performance: Measures and Dimensions

Major Concepts: Statistical Concepts, Production, Employment, Income, Prices

Behavioral Objectives: Participants will define the concepts "labor force," "full employment," and "unemployment."

Participants will identify and describe measures of "economic performance" including GNP and NNP.

Participants will name selected data sources where information related to measures of "economic performance" can be found.

Participants will identify recent rates of inflation and describe the impact of both inflation and deflation on prices and purchasing power.

Participants will define and differentiate among the concepts "amount," "rate," "index number," "real value," and "nominal value."

These topics, major concepts, and behavioral objectives provided a framework that guided instruction in the Economics 615 component of the American Economy Institute of 1977. Learning resources for the course included a text (Campbell R. McConnell. Economics. 6th edition. New York: McGraw-Hill, 1975) and daily presentations by John W. Allen of the Texas A&M University Department of Economics and by invited guests from both the academic world and from the private sector. Total instructional time averaged three to four hours daily for the four weeks of the American Economy Institute.

Approximately two to three hours of daily instructional time was provided for the portion of the Institute centering on EDCI 689a. Learning resources for this course included texts (David G. Armstrong and Robert H. Pinney. Record Keeping for Individualized Instructional Programs. Washington, D.C., National Education Association Publications, 1977; Rita Dunn and Kenneth Dunn. Practical Approaches to Individualizing Instruction: Contracts and Other Effective Teaching Strategies. West Nyack, New York: Parker Publishing, Inc., 1972), presentations by David G. Armstrong of the Texas A&M University Department of Educational Curriculum and Instruction, and class handouts focusing on practical approaches to developing learning stations and to preparing programmed instructional materials. The focus of this course was two-pronged. On the one hand, there was a desire to provide participants with a general background in the area of materials development for individualized programs. On the other hand, there was a desire to provide participants with opportunities to get "hands on" experience in developing individualized materials, focusing on the free enter-

prise system, that they would have prepared and ready to use in their own classrooms during the 1977-1978 school year.

Participants were provided with specific guidelines relating to the preparation of materials organized according to the following approaches: (1) contract activity packages; (2) learning stations or learning centers; (3) programmed instruction. Additionally, all participants were required to develop a record keeping system to help them track progress of individual students as they progressed through the adopted program. Further, participants developed resource materials' lists including items they might wish to draw from as students began working with materials they developed.

Because of the investigators' interest in determining whether participation in a "hands-on" instructional materials development task had a facilitating effect on participants learning of content related to the instructional materials they developed, participants were asked to develop "instructional products" (contract activity packages, programmed instructional units, learning stations/centers) focusing on content limited to the following eight behavioral objectives:

1. Students will point out central features of the "economic problem."
2. Students will define and describe relationships between the concepts "scarcity" and "opportunity cost."
3. Students will differentiate among "traditional economies," "command/centralized economies," "market/decentralized economies," and "mixed economies."
4. Students will describe producer and consumer incentives in a free enterprise economy.
5. Students will describe the market mechanism.
6. Students will identify the role played by competion in a free enterprise economy.

7. Students will identify effects of profits and losses in a free enterprise economy.

8. Students will point out the scope and function of property rights in a free enterprise economy.

B. Sample

The sample used in this investigation included all participants in the 1977 American Economy Institute presented at Texas A&M University, College Station, Texas from June 6, 1977 through July 1, 1977. All participants were experienced teachers intending to return to their respective classrooms for the 1977-1978 school year. Of the 38 participants, all but four were secondary school teachers. These individuals were selected on a first-come, first-served basis from applications received as a result of a distribution of brochures to secondary school administrators, word-of-mouth recommendations from participants in Institutes offered previous years, and from an advertisement in the Texas Outlook. Supporting grant money from the Texas Bureau for Economic Understanding and Invest-in-America National Council, Inc. paid for tuitions and books for all participants. Geographically, they came from nearly every part of the State of Texas. In terms of age and experience, they varied from teachers coming fresh from their first teaching position to those looking forward to retirement after thirty or more years in the classroom. In terms of background in economics, most had a single college-level course or less, a few had a substantial undergraduate background, and one individual held a master's degee in the field. Most were teaching in social studies departments. Of the others, a large majority were business education teachers.

C. Design

This investigation utilized a simple one-group pretest-posttest design. As Campbell and Stanley (1963) note, this design has severe limi-

tations as a design for experimental research. However, it should be noted that this investigation, in character, is evaluation research directed primarily toward an assessment of the impact on participants of the American Economy Institute of 1977. No claim is made for broader application of the results. However, some of the products of this effort, for example the test instruments developed, have potential for application in research efforts more truly experimental in character. Phase II of this project may well generate more widely generalizable information.

The present study utilized simple "t tests" to compare differences between pretest and posttest scores. Differences were designated "significant" all cases where computed "t" exeeded tabled "t" at a critical level of .05. The following comparisons were made:

Prestest scores on the entire 105-item "test of free enterprise understanding" and posttest scores on the entire 105-item "test of free enterprise understanding."

Pretest scores on the 87 "demonstration of understandings"-level items on the "test of free enterprise understanding" and posttest scores on the 87 "demonstration of understandings"-level items on the "test of free enterprise understanding."

Pretest scores on the 18 "making applications and inferences"-level items on the "test of free enterprise understanding" and posttest scores on the 18 "making applications and inferences"-level items on the "test of free enterprise understanding."

Pretest scores on the 13 items on the "test of free enterprise understanding" focusing on the topic "The Economic Problem" and posttest scores on the 13 items on the "test of free enterprise understanding" focusing on the topic "The Economic Problem."

Pretest scores on the 5 items on the "test of free enterprise understanding" focusing on the topic "Alternative Economic Systems" and posttest scores on the 5 items on the "test of free enterprise understanding" focusing on the topic "Alternative Economic Systems."

Pretest scores on the 20 items on the "test of free enterprise understanding" focusing on the topic "Free Enterprise and the Economic Problem" and posttest scores on the 20 items on the "test of free enterprise understanding" focusing on the topic "Free Enterprise and the Economic Problem."

Pretest scores on the 24 items on the "test of free enterprise understanding" focusing on the topic "Supply, Demand, Markets and Prices" and posttest scores on the 24 items on the "test of free enterprise understanding" focusing on the topic "Supply, Demand, Markets and Prices."

Pretest scores on the 21 items on the "test of free enterprise understanding" focusing on the topic "Evaluation of the Free Enterprise System" and posttest scores on the 21 items on the "test of free enterprise understanding" focusing on the topic "Evaluation of the Free Enterprise System."

Pretest scores on the 22 items on the "test of free enterprise understanding" focusing on the topic "Economic Performance: Measures and Dimensions" and posttest scores on the 22 items on the "test of free enterprise understanding" focusing on the topic "Economic Performance: Measures and Dimensions."

Pretest scores on the 39 items associated with behavioral objectives that guided development of participants "instructional products" and posttest scores on the 39 items associated with behavioral objectives that guided development of participants "instructional products."

Pretest scores on the 66 items not associated with behavioral objectives that guided development of participants' "instructional products" and posttest scores on the 66 items not associated with behavioral objectives that guided development of participants' "instructional products."

D. Dependent Measure

Once major topics, major concepts, and behavioral objectives were identified, a dependent measure consisting of a 105-item multiple-choice test was constructed. Available tests, though commendable for the purposes for which they were designed, were found not to have the appropriate narrow focus on issues associated with the free enterprise feature of the American capitalistic system. To assure that testing had a logical and a congruent relationship with the contents being presented during the Economics 615 component of the 1977 American Economy Institute, a decision was made to develop a test specifically targeted toward the topics and concepts that had been identified to guide instruction during the Economics 615 component of the Institute.

Items were examined for validity by experts in economics. Relia-

bility was checked by running pretest and posttest data (from 1977 American Economy Institute participants) through a TESTAT program. TESTAT, a procedure modified and edited by Donald G. Barker and Walter F. Stenning based on Donald J. Veldman's Fortran Programming for the Behavioral Sciences (New York: Holt, Rinehart, Winston, 1967) provides a measure of total test reliability (KR-20 formula) and provides point-by-serial correlations between individual items and (1) subscales and (2) total test scores.

On the pretest, total test reliability was .9290. On the posttest, there was a somewhat surprising decline from that level to .8559. A slight difference in testing procedures may account for this difference. The pretest, administered on the first day of the 1977 American Economy Institute, was the only assessment instrument given that day. But, on the date of the posttest, July 1, 1977 - the final day of the 1977 American Economy Institute, an additional, very challenging 20-item test was given. Possibly, the factor of "test fatigue" contributed to the diminution of computed reliability on the posttest. Even with the decline, investigators concluded that reliabilities were high enough for them to have confidence in the reliability of the instrument developed for use as a pretest and as a posttest.

FINDINGS

T-tests of differences between participants total scores on the pretest and on the posttest revealed that there was a significant gain. Further, t-test comparison of differences between pretest items and posttest items focusing on each of the major topic areas revealed significant gains in scores associated with five of the six major topics. The pattern of pretest and posttest scores by total test and by major topic areas is illustrated below:

	The Economic Problem	Alternative Economic Systems	Free Enterprise and the Economic Problem	Supply, Demand, Markets and Prices	Evaluation of the Free Enterprise System	Economic Performance: Measures and Dimensions	TOTAL
Pretest Means	7.5	4.2	15.6	14.1	14.0	12.3	67.8
Posttest Means	10.6	5.0	18.4	18.9	16.3	15.6	84.8
Number of Test Items	13	5	20	24	21	22	105

N = 38

Other findings included a significant increase in posttest scores over pretest scores on items written at the less challenging "demonstration of understandings" level. Further, there was a significant increase in posttest over pretest scores on items written at the more challenging "making applications and inferences" level. Posttest scores on clusters of items associated with behavioral objectives participants used to guide development of "instructional products" were significantly higher than pretest scores. Likewise, posttest scores on clusters of items associated with behavioral objectives that were not used to guide development of "instructional products" were higher than the parallel pretest scores.

In summary, the following research hypotheses were sustained:

1. Posttest scores on the entire 105-item test were significantly higher than pretest scores.

2. Posttest scores on clusters of items associated respectively with the major topic areas of (1) The Economic Problem, (2) Free Enterprise and the Economic Problem, (3) Supply, Demand, Markets and Prices, (4) Evaluation of the Free Enterprise System, and (5) Economic Performance: Measures and Dimensions were significantly higher than pretest scores.

3. Posttest scores on the 87 test items written at the level of "demonstration of understandings" were significantly higher than pretest scores.

4. Posttest scores on the 18 test items written at the level of "making applications and inferences" were significantly higher than pretest scores.

5. Posttest scores on the 39 items associated with behavioral objectives used to guide development of "instructional products" were significantly higher than pretest scores.

6. Posttest scores on the 66 items not associated with behavioral objectives that guided the development of "instructional products" were higher than pretest scores.

The following research hypothesis was not sustained:

1. No significant difference was observed between pretest scores on clusters of items associated with the major topic area of Alternative Economic Systems.

CONCLUSIONS

In general, findings revealed that the American Economy Institute of 1977 succeeded in transmitting content associated with the guiding behavioral objectives and major topic areas. Further, instructional treatment in five of the six major topic areas resulted in significant gains in test score performance as revealed in comparisons beween pretest and posttest scores. Only with respect to the major topic area of Alternative Economic Systems were no significant differences observed. This finding might be explained by the very small number of test items (five) associated with this area and the high scores individuals achieved on the pretest. The implication is that knowledge in this general topic

area apparently had been acquired by a sizable majority of the Institute participants before their involvement in the Institute program. The very high scores on the pretest left little room for improvement on the posttest. Indeed, the posttest revealed a "topping out" effect characterized by individuals responding correctly to every one of the items associated with the major topic of Alternative Economic Systems. This "topping out effect," a phenomenon caused by (1) participants rather high level of knowledge regarding this area and (2) the very small number of items available, put a ceiling on posttest scores that resulted in their not being capable of providing an incremental gain over the very high pretest scores that was sufficiently large to achieve statistical significance.

Thus, the failure of significant growth associated with the topic of Alternative Economic Systems apparently resulted more from problems associated with measurement than with any learning problems participants encountered. Indeed, participants' background in this area was sound enough in this area to raise a question about the advisability of devoting limited instructional time to a consideration of this issue in the Institute. Some thought may be given to revising the topics to be presented during the 1978 American Economy Institute to eliminate a special block of instruction focusing on Alternative Economic Systems.

In summary, the results of the testing program revealed no serious "soft spots" in the Institute program. As measured by the administrations of the pretest and the posttest, participants demonstrated marked growth in their understandings of concepts associated with major topics. These data suggest no need for extensive redesign of instructional procedures associated with any of the major topic areas. In essence, the implication appears to be that the instructional model being utilized is basically

sound and that, in preparation for the American Economy Institute of 1978, efforts would be directed more properly at honing and refining procedures used during the 1977 Institute than at comprehensive re-designing of the program.

CURRICULUM PRODUCTS RESULTING FROM THIS STUDY

As noted previously, this study comprised the first phase of a two-part effort. The second phase will be directed toward assessing the free enterprise understandings of students taught by participants in the 1977 American Economy Institute. This will be accomplished by administering a pretest in the fall of 1977 and a posttest in the spring of 1978. The instrument to be administered to the secondary school students represents a 50-item distillation of the 105-item test given as a pretest and a posttest to the 1977 American Economy Institute participants.

As was the case with the 105-item version, this test was referenced to major topic areas, major concepts, and behavioral objectives. The major topic areas were identical to those used as foci for the American Economy Institute of 1977 with a single exception. The major topic of Alternative Economic System was eliminated. This was done for two reasons. First of all, results from testing with 1977 American Economy Institute participants revealed that a good deal of information about this topic was available outside of a formal course situation. Second, the topic, though certainly appropriate for a general course in economics, did not meet the criterion of close association with the free enterprise feature of the American capitalistic system. Deletion of this topic left the following five:

1. The Economic Problem

2. Free Enterprise and the Economic Problem
3. Supply, Demand, Markets and Prices
4. Evaluation of the Free Enterprise System
5. Economic Performance Measures

The 50-item test itself was constructed after a careful consideration of analyses of data from pretest and posttest administrations of the 105-item instrument during the 1977 American Economy Institute. Items from the 105-item test were eliminated that, on both pretest and postest, were characterized by negative point-by-serial correlations with total test scores and by eliminating items that on both tests had point-by-serial correlations with total test scores below the level of +.30 and above the level of +.85. A few items were included that violated these decision rules because of a desire to include questions focusing on major concepts associated with each of the five major topic areas noted above.

This 50-item test and the major topics, major concepts, and behavioral objectives were organized into a 29-page booklet entitled "Behavioral Objectives, Major Concepts, A Topic Organization Matrix, and A Developmental Version of a 50-Item Test for a Secondary School Course in Free Enterprise." Out of a recognition of the very limited quantity of material presently available to guide course development to meet the free enterprise education requirement established under Texas House Bill 1118, a decision was made to print 200 copies of these materials. Copies have been distributed to all Regional Educational Service Centers in Texas, to the Social Studies Coordinator at the Texas Education Agency, to a number of district-level social studies coordinators, and to the Educational Resources Information Center (ERIC). The Texas A&M University Center for Education and Research in Free Enterprise has agreed to underwrite costs associated with distri-

bution of these materials. Agencies and individuals have been invited to request additional copies of these materials for distribution to interested parties.

This investigation also spawned the development of a number of "instructional products." Developed by participants during the American Economy Institute of 1977, these "instructional products" include (1) programmed learning materials, (2) contract activity packages, (3) record-keeping schemes for free enterprise education programs, and (4) learning centers and learning stations instructions. Participants developing these materials signed a release authorizing their duplication and distribution to interested parties. These materials have been catalogued and will form initial "deposits" in an "Instructional Materials Bank" to be housed and managed by the Texas A&M Center for Education and Research on Free Enterprise. The Center is presently undertaking a publicity program designed to advise Texas educators that these materials are available. The Center will underwrite some reproduction and mailing costs. A total of 78 separate "instructional products" were developed during the 1977 American Economy Institute. These student-oriented materials will be available to interested individuals after September 1, 1977.

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APPENDIX A

A Matrix of Major Topics, Major Concepts, Behavioral Objectives, and Related Test Item Numbers Used During The American Economy Institute of 1977

A MATRIX OF MAJOR TOPICS, MAJOR CONCEPTS, BEHAVIORAL OBJECTIVES, AND RELATED TEST ITEM NUMBERS USED DURING THE AMERICAN ECONOMY INSTITUTE OF 1977

TOPICS	A. The Economic Problem	B. Alternative Economic Systems
BEHAVIORAL OBJECTIVES	Participants will point out central features of the "economic problem." Participants will define and describe relationships between the concepts "scarcity" and "opportunity cost."	Participants will differentiate among "traditional economies," market/decentralized economies," and "mixed economies."
MAJOR CONCEPTS	1. Economic Wants 2. Productive Resources 3. Scarcity and Choice 4. Opportunity Costs, Trade Offs 5. Marginalism and Equilibrium	1. Tradition 2. Command/Centralized 3. Market Economy 4. Mixed Economy 5. Economic Activities
TEST ITEM NUMBERS	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 76, 77, 83	12, 13, 14, 15, 16

TOPICS	C. Free Enterprise and the Economic Problem	D. Supply, Demand, Markets and Prices
BEHAVIORAL OBJECTIVES	Participants will describe producer and consumer incentives in a free enterprise economy. Participants will describe the market mechanism. Participants will identify the role played by competition in a free enterprise economy. Participants will identify effects of profits and losses in a free enterprise economy. Participants will point out the scope and function of property rights in a free market economy.	Participants will define the concepts "supply" and "demand" and describe how changing relationships between supply and demand affect prices. Participants will describe the role of prices in a free market economy. Participants will describe variables that go together to define a "market structure."
MAJOR CONCEPTS	1. Incentives 2. Market Mechanism 3. Competition 4. Circular Flow of Income 5. Role of Profits and Losses 6. Economic Freedom 7. Property Rights 8. Limited Government	1. Microeconomics 2. Market 3. Supply and Demand 4. Prices, Wages, Rents, Interest Rates 5. Market Structures 6. "Other Things Being Equal"
TEST ITEM NUMBERS	17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 72, 73, 74, 75, 78, 82, 84	30, 31, 32, 33, 34, 35, 36, 37, 79, 80, 81, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 105

TOPICS	E. Evaluation of the Free Enterprise System	F. Economic Performance: Measures and Dimensions
BEHAVIORAL OBJECTIVES	Participants will critique the performance of economic systems in terms of their (a) allocative efficiency, (b) distribution of income/wealth, (c) ability to promote economic stability. Participants will identify goals of society and point out how alternative priorities among these goals affect the nature of a given economic system. Participants will evaluate governmental intervention in the private sector.	Participants will define the concepts "labor force," "full employment," and "unemployment." Participants will identify and describe measures of "economic performance" including GNP and NNP. Participants will name selected data sources where information related to measures of "economic performance" can be found. Participants will identify recent rates of inflation and describe the impact of both inflation and deflation on prices and purchasing power. Participants will define and differentiate among the concepts "amount," "rate," "index number," "real value," and "nominal value."
MAJOR CONCEPTS	1. Goals of Society 2. System Performance 3. Role of Government	1. Statistical Concepts 2. Production, Employment Income, Prices 3. Income 4. Prices
TEST ITEM NUMBERS	38, 39, 40, 41, 42, 43, 44, 45, 46 47, 48, 49, 50, 51, 52, 100, 101, 102 103	53, 54, 55, 56, 57, 58, 59, 60 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 98, 99, 104

APPENDIX B

Test of Free Enterprise Understanding (105 item version) and Key

1. The process of satisfying wants is referred to as
   a. consumption.
   b. gratification.
   c. utilization.
   d. accommodation.

2. Natural resources, human resources, and capital goods are examples of
   a. contemporarial indices.
   b. productive resources.
   c. quota-based resources.
   d. marginal resources.

3. Capital goods are
   a. accumulations of products that can be readily converted to cash.
   b. products distributed primarily from political centers of industrial nations.
   c. goods produced by man's past efforts that are available to produce other goods in the future.
   d. consumers' holdings of bonds, debentures, commons stocks, preferred stocks, and trust certificates that can be converted easily to cash.

4. Because people's wants exceed available resources, there is created the basic economic problem of
   a. acceleration.
   b. marginality.
   c. elasticity.
   d. scarcity.

5. Since wants exceed available resources, people, in deciding how to use those resources, are forced to
   a. abandon their wants.
   b. call on the government.
   c. make choices.
   d. call in their margins.

6. When a decision is made to use a scarce resource in a certain way, something is given up. The term that is used to describe what is given up is
   a. marginal resource.
   b. opportunity cost.
   c. dichotomous expense.
   d. utility decline point.

7. Costs

   a. are always measured in terms of money.

   b. may include things other than monetary costs.

   c. never include monetary considerations.

   d. always exceed residuals.

8. Which of the following statements is most consistent with the definition of "opportunity cost?"

   a. The cost of opportunities parallels shifts in negative demand curve ratios.

   b. The cost of any act chosen is equal to the cost of any other act given up as a result of that choice.

   c. Costs reflect entry-level surcharges that occur when businesses are first opened.

   d. Costs reflect philogenous variables, whereas prices reflect protogenous variables.

9. When a consumer thinks about the consequences of buying one unit less or more or a given product or service, he is engaging in

   a. economic equivocation.

   b. marginalism.

   c. elastic decision-making behavior.

   d. "bootstrapping."

10. Every economic system attempts to respond to the following three questions:

   a. How much? How fast? How good?

   b. What? How? For whom?

   c. When? Where? Why?

   d. How soon? How much? Where?

11. When changes occur in supplies of goods provided or in demands for goods available, a series of reactions occurs. When these reactions subside, a new stability of prices, supply, and demand is observed. This stability is referred to as the

   a. marginal utility.

   b. aggregate pleasure effect.

   c. symbiotic demand node.

   d. equilibrium.

12. When consumers live in a society in which their decisions directed toward solution of the economic problem tend to repeat decisions of their ancestors, that society is likely to be characterized as a

   a. command economy.

   b. traditional economy.

   c. market economy.

   d. infrastructured economy.

13. A society in which decisions are made in the economic realm by a centralized governmental authority is likely to be characterized as a

    a. command economy.

    b. decentralized economy.

    c. market economy.

    d. traditional economy.

14. A society in which all persons participate in economic decisions in their varying roles as individual consumers and producers is likely to be characterized as a

    a. command economy.

    b. centralized economy.

    c. traditional economy.

    d. market economy.

15. Most societies have neither completely centralized nor completely decentralized economies. They have

    a. market economies.

    b. dichotomous economies.

    c. mixed economies.

    d. marginally allocative economies.

16. The economic activities of production, exchange, consumption, investment, and savings

    a. characterize all economic systems.

    b. characterize all economic systems except for command economies.

    c. characterize only market economies.

    d. characterize traditional and command economies, but not market economies.

17. Which of the following statements <u>most</u> accurately describes the effect of individual economic incentives on consumer behavior?

    a. Consumers reduce their desires to obtain total satisfaction and accept the limited amount of goods they can afford.

    b. Consumers allocate their limited incomes to maximize their total satisfaction.

    c. Consumers increase their savings and refuse to buy goods beyond those they need for physical survival.

    d. Individual consumers adjust their desires so that they are at the same level as those of every other consumer in the society.

18. In the American economy, the most important motivating force behind economic behavior is

    a. governmental action.

    b. individual economic incentives.

    c. collective incentives.

    d. central planning.

19. Producers are encouraged to use productive resources efficiently because of

    a. consumerism.

    b. egalitarianism.

    c. competition.

    d. government regulation.

20. The conflict of interests between consumers and producers is reconciled by the

    a. Federal Reserve System.

    b. fiscal policies of the government.

    c. market mechanism.

    d. rulings of judicial economic arbiters.

21. In a competitive market, adjustments in prices serve to

    a. allocate resources toward uses most highly valued by society.

    b. allocate resources inefficiently.

    c. decrease competition.

    d. create severe misalignments between demands for goods and supplies of goods.

22. The principal resource allocation system of a free enterprise economy is

    a. monetary policy.

    b. fiscal policy.

    c. markets and prices.

    d. regulatory mandates.

23. A natural feature of free markets is rivalry among producers. This phenomenon is termed

    a. cartelism.

    b. competition.

    c. monopoly.

    d. central planning.

24. In the American economy, profits fulfill which of the following?

    a. They provide income to business, but no incentives for production.

    b. They provide incentives for production, innovation, and risk taking and also signal to business that consumers are being satisfied.

    c. The provide neither income to business, nor incentives for production.

    d. They provide a concentration of wealth for owners that takes money out of circulation and, consequently, diminishes workers' standard of living.

25. The best example of non-price competition in the following list of possibilities is:

    a. A repairman reduces the charge for a house call.

    b. A grocer pipes in music for customer pleasure.

    c. A gas station lowers prices eight cents a gallon.

    d. A wholesaler offers a discount for volume purchases.

26. In one direction, there is a circular flow of money from business to households in the form of income (salaries) and from the households to business in the form of money spent for goods and services. There is also a flow in the opposite direction consisting of

    a. productive resources and finished goods.

    b. business income and finished goods.

    c. productive resources and public expenditures.

    d. business income and productive resources.

27. Relatively easy entry of new producers into the market and absence of restrictions on consumer and producer spending are examples of

    a. central planning.

    b. equal distribution of social wealth.

    c. economic equity.

    d. economic freedom.

28. Which one of the following pairs of characteristics is most closely associated with a free enterprise economy.

    a. central planning / concern for equity.

    b. rights to private property / belief in limiting governmental action in the economic sphere.

    c. utilizing fiscal policy to prevent high unemployment / belief in enlarging governmental action in the economic sphere.

    d. tradition-mandated consumer decision-making / concern for stability.

29. Business losses are signals from consumers that are likely to result in

    a. an increase in production.

    b. a decrease in production.

    c. no change in production.

    d. employment of additional workers.

30. Microeconomics includes all of the following except

    a. the study of how changes in Gross National Product affect employment levels.

    b. the study of individual households, firms, and markets.

    c. the study of how prices and outputs are determined in markets.

    d. the study of how the price mechanism allocates resources.

31. Which of the following best describes the term "market" as it is used by economists?

    a. a place where stocks and bonds are traded in New York

    b. a place where liquid assets, particularly cash and demand deposits, are held in escrow.

    c. a mechanism which facilitates exchange among buyers and sellers of goods, services, and productive resources.

    d. a building where retailers and purchasers come together for the purpose of resource exchange.

32. The totals of all individual decisions to buy or sell in a market can be represented by

    a. independently elastic volume curves.

    b. discount and rediscount.

    c. schedules of supply and demand.

    d. margin cost and maximal utility ratios.

33. A "surplus" is defined as a situation when

    a. quantity demanded exceeds costs.

    b. quantity supplied equals quantity demanded.

    c. quantity supplied exceeds quantity demanded.

    d. quantity demanded exceeds quantity supplied.

34. When a shortage exists in a free market, we can conclude

    a. that the current price is higher than the equilibrium price.

    b. that the current price is lower than the equilibrium price.

    c. that the current price is equal to the equilibrium price.

    d. nothing about the current price and its relation to the equilibrium price.

35. While levels of each of the following vary according to prevailing supply and demand conditions, three of these terms more typically are used to refer to services exchanged in the market than to goods exchanged in the market. The term most frequently used in discussions centering of the exchange of goods is

    a. wage.

    b. price.

    c. rent.

    d. interest.

36. The term "market structure" refers to

    a. the number and arrangement of buildings used by the individual firm.

    b. the administrative chain of authority within a given business.

    c. the degree of competition among producers in a given market.

    d. the entire scaling of economic institutions from small credit organizations, to large regional banks, and, finally, culminating in the Federal Reserve System.

37. If a given market were characterized by a large number of sellers, no barriers to the entry of new firms, no collusion among producers, and limited governmental intervention, then, in all likelihood, this market would be

    a. a monopolistic market.

    b. an oligopolistic market.

    c. a competitive market.

    d. a cartel.

38. An economic system most clearly is concerned with questions related to

    a. society's material wants.

    b. society's transcendental wants.

    c. society's non-material wants.

    d. society's spiritual wants.

39. Freedom of enterprise refers to all of the following except:

    a. businesses' freedom to acquire resources they desire and for which they are able to pay.

    b. businesses' freedom to secure governmental regulation of "unfair" competition.

    c. businesses' freedom to produce any product and offer it for sale at any price they desire.

    d. businesses' freedom to invest in any way they please.

40. Freedom of individual choice refers to all of the following except:

    a. individuals' freedom to accept any job subject only to the limitations of their abilities.

    b. individuals' freedom to quit any job.

    c. individuals' freedom to use their own resources subject to no restraints whatever.

    d. individuals' freedom to buy any goods subject only to constraints of their own budgets.

41. The concept of "technical efficiency" refers to which of the following?

    a. distributing large numbers of goods to promote the highest social good in accordance with regulations of the government that set prices low.

    b. allocating resources to achieve the maximum possible "output" for each unit of "input."

    c. using large numbers of moderately paid workers to produce goods rather than small numbers of highly paid workers.

    d. allocating resources in such a way that the total value of goods is regulated by a central planning authority.

42. Discussions centering on the concept "equity" often lack clarity because
    a. the formula for computing this arithmetic concept is complex.
    b. the defining characteristics of the concept are not universally agreed upon.
    c. the concept represents an unworthy social goal.
    d. the concept is frequently confused with "equine."

43. "Economic stability" commonly refers to both
    a. prices and demand.
    b. employment and wages.
    c. prices and employment.
    d. employment and demand.

44. Economic growth results when there is an increase in
    a. total nominal dollar wages paid to workers.
    b. total nominal dollar value of products produced.
    c. per capita output of the economy in "real" dollars.
    d. total face value of money in circulation.

45. In the "ideal" free enterprise economy, the primary role of government is to
    a. assure full employment.
    b. serve as a "rule maker," protect individual freedom and property rights, and preserve competition.
    c. use fiscal and monetary policy to ensure that neither undesirable inflation nor undesirable deflation occurs.
    d. assure economic stability through centralized economic planning.

46. Free enterprise advocates a limited role for government in the economy so as to
    a. protect individual freedom.
    b. guarantee price stability.
    c. equalize distribution of goods produced.
    d. assure increases in per capita economic output through federal planning.

47. Governmental policies and programs such as the federal minimum wage, food stamps, social security, and Medicare represent attempts to
    a. assure "real" economic growth.
    b. make the distribution of income more equal.
    c. achieve stabilization of prices.
    d. promote efficiency.

48. "Externalities" refer to

    a. both costs and benefits of production not registered in the market place.

    b. costs firm pay for materials in addition to those incurred for raw materials.

    c. cost factors associated with resource location as opposed to resource transformation.

    d. regulatory activities of federal agencies.

49. The free enterprise system automatically encourages

    a. technical efficiency but not economic efficiency.

    b. technical efficiency and economic efficiency.

    c. economic efficiency but not technical efficiency.

    d. economic inefficiency.

50. Because of "externalities," the free market system

    a. may not achieve the optimum level of production of public or social goods.

    b. never overproduces any commodities.

    c. each household receives an equal allocation of resources.

    d. it is necessary to await governmental decisions to identify items in short supply.

51. If efficiency can be achieved only through large scale production, one consequence may be

    a. a tendency for competition to increase because a larger number of firms are likely to go into production.

    b. a tendency for a smaller total number of firms each to acquire a smaller total percentage of market power.

    c. a tendency for there to be less competition among firms and greater market power for each.

    d. an elimination of governmental interest in business regulation.

52. The government acts to put people to work on public projects. This action is an example of governmental attempts to promote

    a. economies of scale.

    b. economic growth and stability.

    c. technical efficiency.

    d. economic freedom.

53. National wealth is a figure that represents

    a. an amount.

    b. a rate.

    c. a combination of an amount and a rate.

    d. neither an amount nor a rate.

54. Index numbers are used to reflect
    a. amounts, but not rates.
    b. rates, but not amounts.
    c. neither rates nor amounts.
    d. both rates and amounts.

55. Inflation is expressed as
    a. an amount.
    b. a rate.
    c. a combination of an amount and a rate.
    d. neither an amount nor a rate.

56. In economics, the "real" value of an item refers to
    a. its intrinsic value in terms of its worth in exchange for another item.
    b. the numerical value that has been attached to the item.
    c. what the government says the item is worth now.
    d. what the government says the item was worth when it was first produced.

57. In economics, the "nominal" value of an item refers to
    a. the numerical value (perhaps the price in dollars) attached to the item.
    b. an unchanging intrinsic value attached to the item.
    c. the name or nominum given to the item.
    d. the fixed value attached to each unit of an item that remains unchanged over time.

58. When individuals complain that, though their wages have increased, they still are not "getting ahead," they may well have experienced
    a. an increase in "nominal" wages, but not in "real" wages.
    b. an increase in "real" wages, but not in "nominal" wages.
    c. an increase in both "real" wages and in "nominal" wages.
    d. an increase in neither "real" wages nor in "nominal" wages.

59. The "nominal" value of all final goods and services produced in one year measured in terms of current prices is referred to as the
    a. money net national product.
    b. money national income.
    c. money gross personal income.
    d. money gross national product.

60. The "labor force" includes
    a. those 16 and older who are able to work.
    b. those 16 and older who are willing to work.
    c. those 16 and older willing and able to work.
    d. those 16 and older who are currently working.

61. Both "unemployment" and "full employment" are expressed as percentages of
    a. the total population.
    b. those people presently employed.
    c. the labor force.
    d. all people 16 and older.

62. Net National Product is defined as
    a. Gross National Product minus depreciation.
    b. Gross National Product plus depreciation.
    c. National Income minus depreciation.
    d. National Income plus depreciation.

63. "Real" Gross National Product is
    a. National Income adjusted for current prices.
    b. money Gross National Product adjusted for changes in prices.
    c. Net National Product divided by the inflation rate.
    d. Personal Income adjusted for inflation.

64. Personal Income tends to be
    a. the same size as disposable income.
    b. larger than disposable income.
    c. smaller than disposable income.
    d. larger than National Income.

65. A retired army man may receive free medical attention on army posts. This is an example of
    a. nominal income.
    b. non-money income or income "in kind."
    c. monetary income.
    d. disposable dollar income.

66. The "purchasing power" of the dollar
    a. goes down as prices go down.
    b. goes up as prices go up.
    c. goes down as prices go up.
    d. is unrelated to the price level.

67. From the end of World War II to 1976, the average annual rate of price inflation was in the range of

a. 0 to 2%.

b. 2 to 4%.

c. 4 to 6%.

d. 6 to 8%.

68. From 1965 to 1976, the average annual rate of price inflation was in the range of

a. 0 to 2%.

b. 2 to 4%.

c. 4 to 6%.

d. 6 to 8%.

69. From 1971 to 1976, the average annual rate of price inflation was in the range of

a. 0 to 2%.

b. 2 to 4%.

c. 4 to 6%.

d. 6 to 8%.

70. In the nation of Economia, workers wages increased 19% in 1975 and 15% in 1976. Inflation rates were 5% in 1975 and 20% in 1976. Given these figures, it is reasonable to conclude that

a. there was a greater gain in "real" wages in 1976 than in 1975.

b. there was a greater gain in "real" wages in 1975 than in 1976.

c. there was a greater gain in "nominal" wages in 1975 than in 1976.

d. there was equal gains in "nominal" wages in 1975 and 1976.

71. Mabel Smith, trained as a teacher, now is married and chooses to stay home with her two pre-school children. Ronald Allen is a 21 year-old engineering student who, this fall, is taking a full load of courses at a state university. James Johnson has graduated from college and is looking for a position in his major field, accounting.

Which of these individuals is (are) part of the "labor force?"

a. all three

b. Mabel Smith and James Johnson

c. James Johnson

d. Ronald Allen

72. The stronger the property rights are,

a. the greater the power of government.

b. the more limited the power of government.

c. the more centralized the economy.

d. the more regulated is business.

73. Basic to the principle of "right to property" are individuals' rights to
    a. decide the use of property and to transfer rights of property.
    b. decide the use of property but not to transfer rights of property.
    c. transfer rights of property but not to decide the use of property.
    d. deny property rights of others.

74. Private property rights
    a. result in owners lacking incentives to conserve on resource use.
    b. result in owners having incentives to conserve on resource use.
    c. result in owners exploiting resources irresponsibly.
    d. prompt owners to utilize scarce resources quickly to take advantage of high prices.

75. Poorly specified or poorly policed property rights
    a. have little impact on the ability of the market system to allocate resource.
    b. make more efficient the allocation of resources through the operation of the market system.
    c. must be expected because free enterprise economists seek a total absence of a role for government even in the area of protecting property rights.
    d. weaken the effectiveness of the market system in allocating resources efficiently.

76. A good is scarce when
    a. the total supply available in a given year is much reduced from the total supply available during the previous year.
    b. there is not enough available for an individual to have all he wants without sacrificing something else he wants.
    c. the government includes it on the official "scarce commodities" list.
    d. it can be had in desired quantities with no sacrifice of other desired goods.

77. Anything that is scarce must be
    a. in short <u>total</u> supply.
    b. rationed.
    c. very popular.
    d. very expensive.

78. Competition, a condition that is not unique to the free enterprise system, results because of

a. natural combativeness of human beings.

b. a natural law mandating equal distribution of resources.

c. scarcity in a multi-person world.

d. needs for competitive affiliation.

79. An "effective want" is characterized by

a. a simple verbalized expression of desire for a given item.

b. a willingness to commit resources to satisfy a desire for a given item.

c. a desire for a useful item.

d. a desire for a given item that, in turn, can satisfy other wants.

80. Demand measures only

a. effective wants.

b. descriptive wants.

c. parsimonious wants.

d. prescriptive wants.

81. Analyses of changes in price during movement from one market equilibrium to another resulting from a change in demand assumes that

a. Net National Product always exceeds Gross National Product.

b. all other things are equal.

c. inflation assures growth in "real" purchasing power.

d. results will always reflect economic growth.

82. Competition results in all of the following except:

a. diffusing buyers and sellers so that the actions of no single individual will significantly influence the price of a product.

b. dispersing economic power.

c. assuring that wants of each individual will be met.

d. preventing individuals from manipulating the market.

83. There is a seldom-occurring compound in nature known as dermatorum. It has no known use. The total world supply is estimated to be less than two metric tons.

In 1961, a little-known San Francisco rock group, The Doleful Peanut Butter, recorded a song entitled Pineapple Panache. This song has become a highly prized collectors item much in favor among the hundreds of thousand of fans of The Doleful Peanut Butter. Only one thousand copies of Pineapple Panache were released.

Which of the following statements accurately describes the scarcity of dermatorum and of the recording of Pineapple Panache?

a. Both dermatorum and the Pineapple Panache record are scarce.

b. Only the dermatorum is scarce.

c. Only the Pineapple Panache record is scarce.

d. Neither the dermatorum nor the Pineapple Panache record is scarce.

84. A rock musician makes $16,000 for a single appearance. A college professor makes $16,000 for a year's work. The difference between the price of labor of these two individuals reflects

a. a consideration of the principle of equity that assures that each gets paid at the same rate.

b. a difference in market supply and demand relationships for each service.

c. governmental wage intervention in support of the musical arts.

d. a wage structure stemming from centralized planning.

85. In economics the "law of demand"

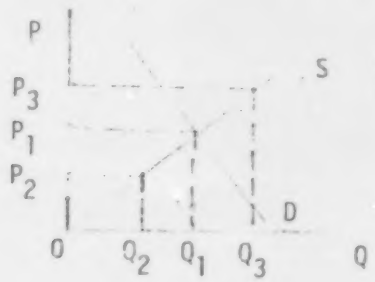
a. says that the power of demand exceeds that of supply in determining market prices.

b. says that as price increases the quantity demanded increases and vice versa.

c. says that as price increases the quantity demanded decreases and vice versa.

d. says that profits are controlled by product demand.

Answer Questions 86 and 87 on the basis of the following diagram.



86. If there is a "surplus" in this market, then a price such as _____ prevails.

a. P_1 b. P_2

c. P_3 d. cannot be determined

87. The "equilibrium" quantity in this market is

a. Q_1 b. Q_2

c. Q_3 d. cannot be determined

88. Based on the following table the equilibrium price in this market is:

Price	Quantity Demanded	Quantity Supplied
$1	10	50
2	20	40
3	30	30
4	40	20

a. $1 b. $2

c. $3 d. $4

89. In a competitive labor market for elevator operators, assume an equilibrium wage rate of $2.00 per hour. If tomorrow the government sets a minimum wage of $2.50 per hour, we should expect:

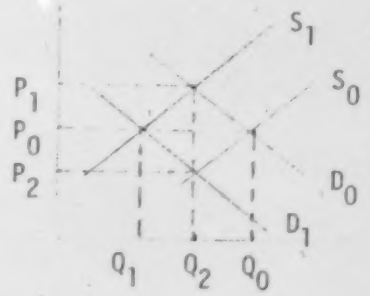
a. the wage rate to rise to $2.50 and the number of people employed as elevator operators to increase.

b. the wage rate to rise to $2.50 and the number of people employed as elevator operators to decrease.

c. the wage rate to rise to $2.50 and the number of people employed as elevator operators to remain unchanged.

d. the wage rate to rise to $2.50, the number of people wanting to work as elevator operators to rise, but the number of people actually employed as elevator operators to decline.

Answer questions 90 through 93 on the basis of the following diagram of demand and supply in a competitive market for product X.



90. A movement of supply from S_0 to S_1 would reflect all of the following except:

a. an increase in the cost of the production of X.

b. an increase in the tax on units of X sold.

c. a flood which destroyed part of the land on which X is produced.

d. the discovery of a new and more efficient technique for production of X.

91. If Demand shifted from D_0 to D_1 while supply remained at S_0, we can say that:

a. The demand for X has increased and the market price will rise to P_0

b. The demand for X has decreased and the price and quantity of X sold will decrease

c. The demand for X has decreased and the price and quantity of X sold will increase.

d. The demand for X has increased and the price and quantity of X sold will increase.

92. If demand for X shifts from D_0 to D_1 as a result of an increase in the price of product Y, we can conclude that:

a. X and Y are independent goods.

b. X and Y are complimentary goods.

c. X and Y are substitute goods.

d. X is an inferior and Y is a normal goods.

93. A shift in demand D_0 to D_1 might be caused by:

a. an increase in the price of substitute product Y.

b. a decline in the price of X.

c. a decrease in income if X is an inferior good.

d. an increase in money incomes if X is a normal good.

94. If two goods are compliments, such as beer and pizza, bread and butter, etc., we should expect the rise in the price of one of these goods to:

a. shift the supply curve of the other to the right.

b. shift the supply curve of the other to the left.

c. shift the demand curve of the other to the right.

d. shift the demand curve of the other to the left.

95. The "price elasticity of demand" measures:

a. the extent to which business can stretch its resources.

b. the degree of both concentration and competition in a market.

c. the extent to which price changes as incomes change.

d. the degree to which quantity demanded changes in response to a change in price.

96. All of the following <u>except one</u> will tend to increase the price elasticity of demand.

a. X is a "luxury" type good.

b. there are few good substitutes for X.

c. the price of X represents a large part of the average family's income.

d. X is a "durable" good.

97. The overall level of real wages in the United States is basically dependent upon

a. the level of productivity of the economy.

b. the minimum wage rate.

c. the rate of inflation.

d. extent to which the government regulates the rate of prices and technological progress.

98. An income tax is progressive if:

a. the tax rate varies inversely with income.

b. the percentage of income paid as taxes increases as income increases.

c. the percentage of income paid as taxes is the same regardless of the size of income.

d. the absolute amount paid as taxes varies directly with income.

99. In the United States it is estimated that:

a. labor resources account for about 83 percent and all other resources for about 17 percent of national income.

b. labor resources account for about 50 percent and all other resources for about 50 percent of national income.

c. labor resources account for about 95 percent and all other resources for about 5 percent of national income.

d. labor resources account for about 25 percent and all other resources for about 75 percent of national income.

100. During the 1947-1976 period manufacturing profits (after income taxes) expressed as a percent of stockholders equity has averaged approximately:

a. 4 percent

b. 8 percent

c. 12 percent

d. 20 percent

e. 33 percent

101. 1976 per capita disposable (after taxes) income in the United States was approximately

a. $2800

b. $3700

c. $4500

d. $5500

3. $7100

102. The maximum marginal tax rate on "earned" personal income currently is:

a. 35 percent

b. 40 percent

c. 50 percent

d. 70 percent

e. 90 percent

103. In 1972 the top 5 percent of U.S. families (ranked according to earned income) received ___?___ percent of total personal income earned by all families.

a. 5 percent

b. 16 percent

c. 24 percent

d. 35 percent

104. In 1975, high school graduates as a percent of persons 18 years old was:

a. 45 percent

b. 60 percent

c. 75 percent

d. 85 percent

105. Which of the following is <u>numerically</u> the dominant type of business in the United States?

a. cooperatives

b. partnerships

c. proprietorships

d. corporations

KEY

Question	Answer	Question	Answer	Question	Answer
1	A	51	C	101	D
2	B	52	B	102	C
3	C	53	A	103	B
4	D	54	D	104	C
5	C	55	B	105	C
6	B	56	A		
7	B	57	A		
8	B	58	A		
9	B	59	C		
10	B	60	C		
11	D	61	C		
12	B	62	A		
13	A	63	B		
14	D	64	B		
15	C	65	B		
16	A	66	A		
17	B	67	B		
18	B	68	C		
19	C	69	D		
20	C	70	B		
21	A	71	C		
22	C	72	B		
23	B	73	A		
24	B	74	B		
25	B	75	D		
26	A	76	B		
27	D	77	B		
28	B	78	C		
29	B	79	B		
30	A	80	A		
31	C	81	B		
32	C	82	C		
33	C	83	C		
34	B	84	B		
35	B	85	C		
36	C	86	C		
37	C	87	A		
38	A	88	B		
39	B	89	D		
40	C	90	D		
41	B	91	B		
42	B	92	B		
43	C	93	A		
44	C	94	D		
45	B	95	D		
46	A	96	B		
47	B	97	A		
48	A	98	B		
49	B	99	A		
50	A	100	C		

APPENDIX C

A Matrix of Proposed Behavioral Objectives,
Major Topics and Concepts, and Test Item Numbers
From a Developmental Version of a Test for a Program
In Free Enterprise Education Consistent with the Intent of
Texas House Bill 1118

A MATRIX OF PROPOSED BEHAVIORAL OBJECTIVES,
MAJOR TOPICS AND CONCEPTS, AND TEST ITEM NUMBERS
FROM A DEVELOPMENTAL VERSION OF A TEST FOR A PROGRAM
IN FREE ENTERPRISE EDUCATION CONSISTENT WITH THE INTENT OF
TEXAS HOUSE BILL 1118

TOPICS	The Economic Problem	Free Enterprise and the Economic Problem
BEHAVIORAL OBJECTIVES	Each student will point out central features of the "economic problem." Each student will define and describe relationships existing between the concepts "scarcity" and "opportunity cost."	Each student will describe producer and consumer incentives in a free market economy. Each student will describe the operation of the "market mechanism." Each student will identify effects of profits and losses in a free market economy. Each student will point out the scope and function of property rights in a free market economy.
MAJOR CONCEPTS	natural resources human resources capital resources scarcity choice opportunity costs trade-offs	incentives producer incentives consumer incentives market mechanism resource allocation prices competition circular flow of income profits and losses property rights limited government
TEST ITEM NUMBERS	1, 2, 3, 6, 7, 37, 43	4, 5, 8, 9, 10, 11, 12, 13, 14, 34, 35, 36, 38, 42

TOPICS	Supply, Demand, Markets and Prices	Evaluation of the Free Enterprise System
BEHAVIORAL OBJECTIVES	Each student will define the concepts "supply" and "demand" and describe how changing relationships between supply and demand affect prices. Each student will describe the role of prices in a free market economy. Each student will describe variables that go together to define a "market structure."	Each student will compare and contrast economic systems in terms of their "allocative efficiency." Each student will explain how alternative priorities among goals of society may affect the nature of a given economic system. Each student will evaluate the impact of governmental intervention in the private sector.
MAJOR CONCEPTS	market supply and demand shortage surplus market structure "other things being equal"	goals of society system performance allocative efficiency role of government externalities
TEST ITEM NUMBERS	15, 16, 17, 39, 40, 41, 44, 45, 46, 47, 50	18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 49

TOPICS	Economic Performance: Measures and Dimensions
BEHAVIORAL OBJECTIVES	Each student will define the concepts "labor force," "full employment," and "unemployment." Each student will identify and describe measures of economic performance including "gross national product" and "net national product." Each student will name selected data sources where information relating to measures of economic performance can be found. Each student will identify levels of recent rates of inflation and will describe the impact of both inflation and deflation on prices and purchasing power. Each student will define and differentiate among the concepts "amount," "rate,""index number," "real value," and "nominal value."
MAJOR CONCEPTS	amounts, rates index numbers, real values, nominal values, production, employment, income, prices, labor force, gross national product, net national product, income distribution
TEST ITEM NUMBERS	28, 29, 30, 31, 32, 33, 48

APPENDIX D

A Developmental Version of a 50-Item Test
in Free Enterprise Education
and Key

TEST OF FREE ENTERPRISE UNDERSTANDING

(Developmental Version)

1. Goods produced by man's past efforts that are available to produce other goods in the future are known as
   a. trust accumulation goods.
   b. capital goods
   c. pre-assessed goods
   d. competitive goods

2. Since wants exceed available resources, people, in deciding how to use these resources, are forced to
   a. abandon their wants.
   b. call on the government.
   c. make choices.
   d. call in their margins.

3. When a decision is made to use a scarce resource in a certain way, something is given up. The term that is used to describe what has been given up is
   a. marginal resource.
   b. opportunity cost.
   c. dichotomous expense.
   d. utility decline point.

4. Which of the following statements most accurately describes the effect of individual economic incentives on consumer behavior?
   a. Consumers reduce their desires to obtain total satisfaction and accept the limited amount of goods they can afford.
   b. Consumers allocate their limited incomes to maximize their total satisfaction.
   c. Consumers increase their savings and refuse to buy goods beyond those they need for physical survival.
   d. Individual consumers adjust their desires so that they are at the same level as those of every other consumer in the society.

5. In the American economy, the most important motivating force behind economic behavior is
   a. governmental action.
   b. individual economic incentives.
   c. collective incentives.
   d. central planning.

6. Which of the following statements is most consistent with the definition of "opportunity cost?"

   a. The cost of opportunities parallels shfits in negative demand curve ratios.

   b. The cost of any act chosen is equal to the cost of any other act given up as a result of that choice.

   c. Costs reflect entry-level surcharges that occur when businesses are first opened.

   d. Costs reflect philogenous variables, whereas prices reflect protogenous variables.

7. Costs

   a. are always measured in terms of money.

   b. may include things other than monetary costs.

   c. never include monetary considerations.

   d. always exceed residuals.

8. Producers are encouraged to use productive resources efficiently because of

   a. consumerism.

   b. egalitarianism.

   c. competition.

   d. government regulation.

9. The conflict of interests between consumers and producers is reconciled by the

   a. Federal Reserve System.

   b. fiscal policies of the government.

   c. market mechanism.

   d. rulings of judicial economic arbiters.

10 In a competitive market, adjustments in prices serve to

   a. allocate resources toward uses most highly valued by society.

   b. allocate resources inefficiently.

   c. decrease competition.

   d. create severe misalignments between demands for goods and supplies of goods.

11 The principal resource allocation system of a free enterprise economy is

   a. monetary policy.

   b. fiscal policy.

   c. markets and prices.

   d. regulatory mandates.

12. In one direction, there is a circular flow of money from business to households in the form of income (salaries) and from households to business in the form of money spent for goods and services. There is also a flow in the opposite direction consisting of

    a. productive resources and finished goods.

    b. business income and finished goods.

    c. productive resources and public expenditures.

    d. business income and productive resources.

13 Which one of the following pairs of characteristics is most closely associated with a free enterprise economy?

    a. central planning / concern for equity.

    b. rights to private property/ belief in limiting governmental action in the economic sphere.

    c. utilizing fiscal policy to prevent high unemployment/belief in enlarging governmental action in the economic sphere.

    d. tradition-mandated consumer decision-making/ concern for stability.

14. Business losses are signals from consumers that are likely to result in

    a. an increase in production.

    b. a decrease in production.

    c. no change in production.

    d. employment of additional workers.

15. Which of the following best describes the term "market" as it is used by economists?

    a. a place where stocks and bonds are traded in New York.

    b. a place where liquid assets, particularly cash and demand deposits, are held in escrow.

    c. a mechanism which facilitates exchange among buyers and sellers of goods, services, and productive resources.

    d. a building where retailers and purchasers come together for the purposes of resources exchange.

16. The totals of all individual decisions to buy or sell in a market can be represented by

    a. independently elastic volume curves.

    b. discount and rediscount.

    c. schedules of supply and demand.

    d. margin costs and maximal utility ratios.

17. When a shortage exists in a free market, we can conclude

    a. that the current price is higher than the equilibrium price.

    b. that the current price is lower than the equilibrium price.

    c. that the current price is equal to the equilibrium price.

    d. nothing about the current price and its relation to the equilibrium price.

18. Freedom of enterprise refers to all of the following except:

    a. businesses' freedom to acquire resources they desire and for which they are able to pay.

    b. businesses' freedom to secure governmental regulation of "unfair" competition.

    c. businesses' freedom to produce any product and offer it for sale at any price they desire.

    d. businesses' freedom to invest in any way they please.

19. Freedom of individual choice refers to all of the following except:

    a. individuals' freedom to accept any job subject only to the limitations of their abilities.

    b. individuals' freedom to quit any job.

    c. individuals freedom to use their own resources subject to no restraints whatever.

    d. individuals' freedom to buy any goods subject only to constraints of their own budgets.

20. The concept of "technical efficiency" refers to which of the following?

    a. distributing large numbers of goods to promote the highest social good in accordance with regulations of the government that set prices low.

    b. allocating resources to achieve the maximum possible "output" for each unit of "input."

    c. using large numbers of moderately paid workers to produce goods rather than small numbers of highly paid workers.

    d. allocating resources in such a way that the total value of goods is regulated by a central planning authority.

21. "Economic stability" commonly refers to both

    a. prices and demand.

    b. employment and wages.

    c. prices and employment.

    d. employment and demand.

22. Economic growth results when there is an increase in
    a. total nominal dollar wages paid to workers.
    b. total nominal dollar value of products produced.
    c. per capita output of the economy in "real" dollars.
    d. total face value of money in circulation.
23. Free enterprise advocates a limited role for government in the economy so as to
    a. protect individual freedom.
    b. guarantee price stability.
    c. equalize distribution of goods produced.
    d. assure increases in per capita economic output through federal planning.
24. "Externalities" refer to
    a. both costs and benefits of production not registered in the market place.
    b. costs firms pay for materials in addition to those incurred for raw materials.
    c. cost factors associated with resource location as opposed to resource transformation.
    d. regulatory activities of federal agencies.
25. The free enterprise system automatically encourages
    a. technical efficiency, but not economic efficiency.
    b. technical efficiency and economic efficiency.
    c. economic efficiency, but not technical efficiency.
    d. economic inefficiency.
26. Because of "externalities," the free market system
    a. may not achieve the optimum level of production of public or social goods.
    b. never overproduces any commodities.
    c. assures that each household receives an equal allocation of resources.
    d. depends on the government to identify items in short supply.
27. If efficiency can be achieved only through large scale production, one consequence may be
    a. a tendency for competition to increase because more firms are likely to go into production.
    b. a tendency for a smaller total number of firms each to acquire a smaller total percentage of market power.

c. a tendency for there to be less competition among firms and greater market power for each.

d. an elimination of governmental interest in business regulation.

28. Inflation is expressed as

a. an amount.

b. a rate.

c. a combination of an amount and a rate.

d. neither an amount nor a rate.

29. In economics, the "real" value of an item refers to

a. its intrinsic value in terms of its worth in exchange for another item.

b. the numerical value that has been attached to the item.

c. what the government says the item is worth now.

d. what the government says the item was worth when it was first produced.

30. In economics, the "nominal" value of an item refers to

a. the numerical value (perhaps the price in dollars) attached to the item.

b. an unchanging instrinsic value attached to the item.

c. the name or nominum given to the item.

d. the fixed value attached to each unit of an item that remains unchanged over time.

31. The "labor force" includes

a. those 16 and older who are able to work.

b. those 16 and older who are willing to work.

c. those 16 and older who are willing and able to work.

d. those 16 and older who are currently working.

32. "Net National Product" is defined as

a. Gross National Product minus depreciation.

b. Gross National Porduct plus depreciation.

c. National Income minus depreciation.

d. National Income plus depreciation.

33. Mabel Smith, trained as a teacher, now is married and chooses to stay home with her two pre-school children. Ronald Allen, a 21 year-old engineering student, this fall is taking a full load of courses at the state university. James Johnson has graduated from college and is looking for a position in his major field, accounting.

Which of these individuals is (are) part of the "labor force"?

a. all three

b. Mabel Smith and James Johnson.

c. James Johnson.

d. Ronald Allen.

34. The stronger the property rights are,

a. the greater the power of government.

b. the more limited the power of government.

c. the more centralized the economy.

d. the more regulated is business.

35. Basic to the principle of "right to property" are individuals rights to

a. decide the use of property and to transfer rights of property.

b. decide the use of property but not to transfer rights of property.

c. transfer rights of property but not to decide the use of property.

d. deny property rights of others.

36. Private property rights

a. result in owners lacking incentives to conserve on resource use.

b. result in owners having incentives to conserve on resource use.

c. result in owners exploiting resources irresponsibly.

d. prompt owners to utilize scarce resources quickly to take advantage of high prices.

37. A good is "scarce" when

a. the total supply available in a given year is much reduced from the total supply available during the previous year.

b. there is not enough available for an individual to have all he wants without sacrificing something else he wants.

c. the government includes it on the official "scarce commodities" list.

d. it can be had in desired quantities with no sacrifice of other desired goods.

38. Competition, a condition that is not unique to the free enterprise system, results because of

a. natural combativeness of human beings.

b. a natural law mandating equal distribution of resources.

c. scarcity in a multi-person world.

d. needs for competitive affiliation.

39. An "effective want" is characterized by

    a. a simple verbalized expression of desire for a given item.

    b. a willingness to commit resources to satisfy a desire for a given item.

    c. a desire for a useful item.

    d. a desire for a given item that, in turn, can satisfy other wants.

40. "Demand" measures only

    a. effective wants.

    b. descriptive wants.

    c. parsimonious wants.

    d. prescriptive wants.

41. Analyses of changes in price movement from one market equilibrium to another resulting from a change in demand assume that

    a. New National Product always exceeds Gross National Product.

    b. all other things are equal.

    c. inflation assures growth in "real" purchasing power.

    d. results will always reflect economic growth.

42. Competition results in all of the following except:

    a. diffusing buyers and seller so that the actions of no single individual will significantly influence the price of a product.

    b. dispersing economic power.

    c. assuring that wants of each individual will be met.

    d. preventing individuals from manipulating the market.

43. There is a seldom-occurring compound in nature known as dermatorum. It has no known use. The total world supply is estimated to be less than two metric tons.

    In 1961, a little-known San Francisco rock group, The Doleful Peanut Butter, recorded a song entitled Pineapple Panache. This song has become a highly prized collector's item that is much in favor among the hundreds of fans of The Doleful Peanut Butter. Only one thousand copies of Pineapple Pinache were released.

    Which of the following statements accurately describes the scarcity of dermatorum and of the Pineapple Panache recording?

    a. Both dermatorum and the Pineapple Panache record are scarce.

    b. Only the dermatorum is scarce.

    c. Only the Pineapple Panache record is scarce.

    d. Neither the dermatorum nor the Pineapple Panache record is scarce.

44. In economics, the "Law of Demand" says that

    a. the power of demand exceeds that of supply in determining market prices.

    b. as price increases, the quantity demanded increases and vice versa.

    c. as price increases, the quantity demanded decreases and vice versa.

    d. profits are controlled exclusively by product demand.

45. In a competitive labor market for elevator operators, assume an equilibrium wage rate of $2.00 per hour. If tomorrow, the government sets a minimum wage rate of $2.50 per hour, we should expect

    a. the wage rate to rise to $2.50 and the number of people employed as elevator operators to increase.

    b. the wage rate to rise to $2.50 and the number of people employed as elevator operators to be exactly equal to the number seeking such jobs.

    c. the wage rate to rise to $2.50 and the number of people employed as elevator operators to remain unchanged.

    d. the wage rate to rise to $2.50, the number wanting to work as elevator operators to rise, but the number actually so employed to decline.

46. The overall level of real wages in the United States is basically a function of

    a. the level of productivity in the economy.

    b. the minimum wage rate.

    c. the rate of inflation.

    d. the extent to which the government regulates the rate of price change and the extent of technological progress.

47. The term "market structure" refers to

    a. the number and arrangement of buildings used by the individual firm.

    b. the administrative chain of authority within a given business.

    c. the degree of competition among producers in a given market.

    d. the entire scaling of economic institutions from small credit organizations, to large regional banks, and, finally, to the Federal Reserve System itself.

48. An income tax is "progressive" if

    a. the tax rate goes up as income goes down.

    b. the percentage of income paid as taxes increases as income increases.

    c. the percentage of income paid as taxes is the same regardless of the size of income.

    d. the tax rate goes down as income goes up.

49. The maximum marginal tax rate on "earned" personal income currently is
    a. 35 percent.
    b. 40 percent.
    c. 50 percent.
    d. 70 percent.
50. In the United States, the kind of business arrangement that characterizes the largest number of businesses is the
    a. cooperative.
    b. partnership.
    c. proprietorship.
    d. corporation.

KEY

Test of Free Enterprise Understanding
(Developmental Version)

ITEM	CORRECT RESPONSE	ITEM	CORRECT RESPONSE
1	b	26	a
2	c	27	c
3	b	28	b
4	b	29	a
5	b	30	a
6	b	31	c
7	b	32	a
8	c	33	c
9	c	34	b
10	a	35	a
11	c	36	b
12	a	37	b
13	b	38	c
14	b	39	b
15	c	40	a
16	c	41	b
17	b	42	c
18	b	43	c
19	c	44	c
20	b	45	d
21	c	46	a
22	c	47	c
23	a	48	b
24	a	49	c
25	b	50	c